Upregulation of microRNA processing enzymes Drosha and Dicer in gestational diabetes mellitus

Abstract

Background& Objective: MicroRNAs (miRNAs) have been shown to play important roles in diverse cellular processes and linked to variety of disorders. Dicer and Drosha are two major enzymes in the miRNA biogenesis process. DGCR8 is the assistant of Drosha in the microprocessor complex.

Methods :In this study, we evaluated the mRNA expression profiles of major miRNA processing machinery Drosha, Dicer, and DGCR8 in gestational diabetes mellitus (GDM), pregnant and healthy women.

Results : Our findings indicate that the expression levels of Drosha, Dicer and DGCR8 were upregulated in both pregnant and GDM patients compared to the control group. However, Drosha and Dicer were upregulated more than pregnant group.

conclusion, we detected dysregulation of Drosha, Dicer and DGCR8 expression in pregnant and GDM patients when compared to healthy control participants. Therefore, we favor the hypothesis that miRNAs are involved in the development of GDM.

KEYWORDS:DGCR8; Dicer; Drosha; Gestational Diabetes Mellitus; microRNA; pregnancy